

*Flannery et al SID 83  
w/ Berlin NT*

PT New human kinases and phosphatases and polynucleotides, useful for  
PT diagnosing, treating or preventing autoimmune or inflammatory disorders  
PT (e.g. AIDS, allergy or anemia), multiple sclerosis, osteoarthritis,  
PT cancer or hepatitis.  
PS Claim 5; SEQ ID No 84; 424bp; English.  
XX

RESULT 9  
ABX75870  
ID ABX75870 standard; cDNA; 1620 BP.  
XX  
AC ABX75870;  
XX  
DT 30-APR-2003 (first entry)



Alignment of S02  
w/ Berkin NT

LD 1998 JUL 14 13:42

RESULT 8  
AA02558  
ID AA02558 standard; cDNA; 2098 BP.  
XX  
AC AA02558;  
XX  
DT 07-MAY-1999 (first entry)  
XX  
DE Human B1 cDNA.  
XX  
KW B1 protein; intracellular mediator; modulator; inflammation; cell death;  
XX cell survival pathway; intracellular signalling; AIDS; cancer; human; ss:  
OS Homo sapiens.  
XX  
PN W09855507-A2.  
XX

1020

domain, CARD-3 and CARD-4 polynucleotides and proteins and a partial murine CARD-4b protein and genes. The genes and proteins of the invention are involved in the regulation of caspase activation. The caspase recruitment domain (CARD) polynucleotides, polypeptides, homologues and antibodies can be used in screening assays, detection assays, predictive medicine and therapeutic and prophylactic methods of treatment. The methods may be used to diagnose and treat patients which are suffering from a disorder associated with abnormal level or rate of apoptotic cell death, abnormal activity of the Fas/ABO-1 receptor complex, abnormal activity of the TNF receptor complex, or abnormal activity of a caspase. Diseases that may be treated include cancer (particularly follicular lymphoma, carcinomas associated with mutations in p53 and hormone-dependent tumours), autoimmune disorders (e.g. systemic lupus erythematosus), immune-mediated glomerulonephritis, viral infections, Alzheimer's disease, Parkinson's disease, amyotrophic lateral sclerosis, retinitis pigmentosa, spinal muscular dystrophy, cerebellar degeneration, anaemia, myelodysplastic syndrome, myocardial infarction, and stroke. CARD-3 protein interacts with other cellular proteins, and so can be used for regulation of cellular proliferation and differentiation and cell survival. The CARD proteins may also be used to for screen drugs or compounds which modulate their activity. The CARD-4 gene can express a long transcript that encodes CARD-4b, a short transcript that encodes CARD-4S or two CARD-4 splice variants, CARD-4Y and CARD-4Z. This sequence encodes the human CARD-3 protein described in the method of the invention

Sequence 1931 BP; 613 A; 429 C; 416 G; 473 T; 0 U; 0 Other;

Query Match 40.9%; Score 682; DB 2; Length 1931;

Best Local Similarity 99.9%; Pred. No. 0;

Matches 732; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

QY 333 AGTTACAGAGTGTTCAGAGTCCATTACCTATGTGACAGAGAAATGGAATTATCTC 392  
 DB 1151 AGTTACAGAGTGTTCAGAGTCCATTACCTATGTGACAGAGAAATGGAATTATCTC 1210  
 QY 393 TGAACATTCCTTAATATGATGTCACAGAGGAATCATGTGATTCCTCAGCTCCATG 452  
 DB 1211 TGAACATTCCTTAATATGATGTCACAGAGGAATCATGTGATTCCTCAGCTCCATG 1270  
 QY 453 AAAATAGTGTTCCTCTGAAATTCAGAGTCCCTGCAAGCTCTCAAGCAATGATTTT 512  
 DB 1271 AAAATAGTGTTCCTCTGAAATTCAGAGTCCCTGCAAGCTCTCAAGCAATGATTTT 1330  
 QY 513 TATCTAGAAAGCTCAAGCTGTATTTTATGAACTGATCACTGCTGGAATGACA 572  
 DB 1331 TATCTAGAAAGCTCAAGCTGTATTTTATGAACTGATCACTGCTGGAATGACA 1390  
 QY 573 GTTGGGATGACCACTTTCTGATCTCAAGGGGCTGCAATCTGTGATCAAGACCACTC 632  
 DB 1391 GTTGGGATGACCACTTTCTGATCTCAAGGGGCTGCAATCTGTGATCAAGACCACTC 1450  
 QY 633 CATGCTCTCAGCAATATATATCACTCTCAAGCTGACAGAACTCAGAACTCTGCAGC 692  
 DB 1451 CATGCTCTCAGCAATATATATCACTCTCAAGCTGACAGAACTCAGAACTCTGCAGC 1510  
 QY 693 CTGGTATAGCCAGAGCTGATCCAGAGAAAGGGAAGACATTGGAACCAATGACAG 752  
 DB 1511 CTGGTATAGCCAGAGCTGATCCAGAGAAAGGGAAGACATTGGAACCAATGACAG 1570  
 QY 753 AAGCCCTGCTTAACAGTGCCTAGATGCCCTTCTGTCAAGGGAATTGATCATGAAAGAG 812  
 DB 1571 AAGCCCTGCTTAACAGTGCCTAGATGCCCTTCTGTCAAGGGAATTGATCATGAAAGAG 1630  
 QY 813 ACTATGAACCTTTAGTACCAAGCTCAAGGACTCAAAAGTCAGACCAATTACTAGACA 872  
 DB 1631 ACTATGAACCTTTAGTACCAAGCTCAAGGACTCAAAAGTCAGACCAATTACTAGACA 1690  
 QY 873 CTACTGATCCAGAGGAAGATTTGCCAAAGTTATAGTACAAAATTTGAAGATACACA 932  
 DB 1691 CTACTGATCCAGAGGAAGATTTGCCAAAGTTATAGTACAAAATTTGAAGATACACA 1750  
 QY 933 AACAAATGGGCTTCAGCCTTACCCGGAATTAATTGTGTTCTAGATCAACATCTTTAA 992

DB 1751 AACAAATGGGCTTCAGCCTTACCCGGAATTAATTGTGTTCTAGATCAACATCTTTAA 1810  
 QY 993 ATTACTCTCAAAATTAAGCATGTAAAGTACTGTTTTCAGAGAAATGTGTTCAATA 1052  
 DB 1811 ATTACTCTCAAAATTAAGCATGTAAAGTACTGTTTTCAGAGAAATGTGTTCAATA 1870  
 QY 1053 AAGGATTTTATA 1065  
 DB 1871 AAGGATTTTATA 1883

Alignment of AFO27706  
w/ Berlin NT

/product= "CARD-3"

FT XX  
PM XX W09940102-A1.  
PD XX 12-AUG-1999.  
PE XX  
PF XX 05-FEB-1999; 99WO-US002544.  
PR XX 06-FEB-1998; 98US-00019942.  
PR XX 17-JUN-1998; 98US-00099041.  
PR XX 08-DEC-1998; 98US-00207359.  
PA XX (MILL-) MILLENNIUM PHARM INC.  
PI XX Bertin J;  
XX WPI, 1999-494269/41.  
DR XX P-PSDB; AAY31140.  
XX  
XX Novel CARD-3 and CARD-4 genes and polypeptides used or treating  
PT regulation of cellular proliferation and differentiation and cell  
PT survival.

Example 2, Fig 1, 181pp; English.

This invention describes the isolation of novel human caspase recruitment domain, CARD-3 and CARD-4 polynucleotides and proteins and a partial murine CARD-4L protein and genes. The genes and proteins of the invention are involved in the regulation of caspase activation. The caspase recruitment domain (CARD) polynucleotides, polypeptides, homologues and antibodies can be used in screening assays, detection assays, predictive medicine and therapeutic and prophylactic methods of treatment. The methods may be used to diagnose and treat patients which are suffering from a disorder associated with abnormal level or rate of apoptotic cell death, abnormal activity of the Fas/APO-1 receptor complex, abnormal activity of the TNF receptor complex, or abnormal activity of a caspase. Diseases that may be treated include cancer (particularly follicular lymphoma, carcinomas associated with mutations in p53 and hormone-dependent tumours), autoimmune disorders (e.g. systemic lupus erythematosus, immune-mediated glomerulonephritis), viral infections, Alzheimer's disease, Parkinson's disease, amyotrophic lateral sclerosis, retinitis pigmentosa, spinal muscular dystrophy, cerebellar degeneration, ataxia, myelodysplastic syndrome, myocardial infarction, and stroke. CARD-3 protein interacts with other cellular proteins, and so can be used for regulation of cellular proliferation and differentiation and cell survival. The CARD proteins may also be used to for screen drugs or compounds which modulate their activity. The CARD-4 gene can express a long transcript that encodes CARD-4L, a short transcript that encodes CARD-4S or two CARD-4 splice variants, CARD-4Y and CARD-4Z. This sequence encodes the human CARD-3 protein described in the method of the invention

SQ XX Sequence 1931 BP; 613 A; 429 C; 416 G; 473 T; 0 U; 0 Other;

Query Match 74.5%; Score 1864; DB 4; Length 1931;  
Best Local Similarity 99.7%; Pred. No. 5.3e-06;  
Matches 1867; Conservative 0; Mismatches 5; Indels 0; Gaps 0

DY 23 GTCAAGCTGTGTTGGGAAGACAGCGGCTGGCGTGGGCATCCGGGGAAATGGCGCCTTC 82  
Db 12 GTCAAGCTGTGTTGGGAAGACAGCGGCTGGCGTGGGCATCCGGGGAAATGGCGCCTTC 71

DY 83 GTGACCTAATGTGTGGGGGGCAAAAAGAAGGCTCTTGCCGCGCTCGTCTGACGAGGGGGATTAC 142  
Db 72 GTGACCTAATGTGTGGGGGGCAAAAAGAAGGCTCTTGCGCGGCTCGTCTGACGAGGGGGATTAC 131

DY 143 TGGGGCGCTGAAGCGGACAGTAGTGGAGACCTTGAGAACGCCGCCACAAGGGGGCACACC CGGA 202  
Db 132 TGGGGCGCTGAAGCGGAGGTTGGAGACTTGTGGAGACGCCGCCACAGGGGGCACACC CGGA 191

DY 203 ACCGCGCTGAGGCGCCGGGGAACCATGAACGGGGAAGGCCATCTGACAGCGCTTGCCACCAT 262  
Db 192 ACCGCGCTGAGGCGCCGGGGAACCATGAACGGGGAAGGCCATCTGACAGCGCTTGCCACCAT 251

